

Low Noise PAV Ducted Propeller using Automotive Manufacturing, Phase II

Completed Technology Project (2005 - 2007)



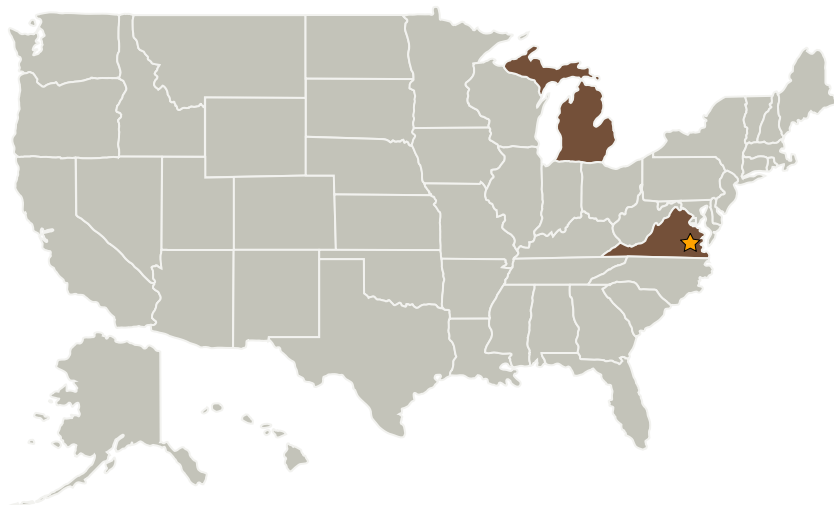
Project Introduction

Munro & Assoc. and MISATS (MU&M) recognize the explosive market pull for low cost airplanes, i.e. PAV, that provide affordable, comfortable and safe traveler. MU&M propose a revolutionary convergence in design integration for propulsor manufacturing technology as a decisive enabler for PAV. The critical target for a sub \$100,000 PAV is a \$10,000 propulsion system. Munro & Assoc.'s (Munro's) innovation will allow this target to be met by adapting advanced automotive manufacturing technology through Lean Design

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. The MU&M target is a \$7,000 engine and drive train and a \$3,000 PAV propulsor that is efficient and produces low community noise by design. Upon successful Phase II development the Lean Manufacturing can take place across an organized supply chain of 4 elements: 1) An off-the-shelf automotive Corvette LS-1 engine 2) Aviation certified accessories 3) The propulsor (shaft, flanges, hub, pitch change mechanism, duct and fan) 4) An FAA certification process for the propulsion system based on the QA system in place for the LS-1 engine production line.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

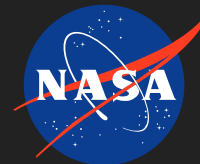
Langley Research Center (LaRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★ Langley Research Center(LaRC)	Lead Organization	NASA Center	Hampton, Virginia
Munro and Associates	Supporting Organization	Industry	Troy, Michigan

Primary U.S. Work Locations	
Michigan	Virginia

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX01 Propulsion Systems
 - └ TX01.1 Chemical Space Propulsion
 - └ TX01.1.3 Cryogenic